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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,894	09/07/2000	Alex Krister Raith	4015-677	2214

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EXAMINER

NGUYEN, LEE

ART UNIT PAPER NUMBER

2683

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/656,894	Applicant(s) RAITH, ALEX KRISTER	
	Examiner LEE NGUYEN	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-21, 23-26, 28-31, 33 and 34 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 22, 27, 32 and 35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2-6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The IDS filed 10/10/01, 4/5/02, 6/25/02, 7/23/02 correspondent to paper No. 3, 4, 5, 6, respectively, has been considered and recorded in the file.

Claim Objections

2. Claims 1, 30, 32 are objected to because of the following informalities: In claim 1 on line 16, the term "refernce" should be changed to --reference--. In claim 32, the claim must end with a ---. In claim 30, line 3, "preformed" should be changed to --performed--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 31 recites the limitation "said predetermined distance" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1-3, 7, 10, 12 are rejected under 35 U.S.C. 102(a) as being anticipated by Yee et al. (US 6,085,090).

Regarding claim 1, Yee teaches a method for controlling the update frequency of a positioning device in a mobile terminal, comprising: storing at least one reference position POS1 (col. 8, line 45) in said mobile terminal; determining the current position POS2; computing a distance of

said current position from said reference position (col. 8, lines 53-55); and determining a positioning update frequency based upon the distance (sleep interval, increase, decrease, col. 8, lines 55-58).

Regarding claims 2-3, 7, Yee also teaches increasing the update frequency when the distance decreases and vice versa, col. 8, lines (55-58).

Regarding claims 10 and 12, Yee teaches a mobile terminal (fig. 2), comprising: a transceiver 114 for transmitting and receiving signals over a wireless channel; memory 106 for storing at least one reference position POS1 (col. 8, line 45); a position estimator (GPS 140) to periodically determine a current position POS2 of said mobile terminal at a variable update frequency (sleep interval, increase, decrease, col. 8, lines 55-58); and a control logic including a processor 104 to calculate the distance of said mobile terminal from said reference position POS1 based on said current position POS2 and to adjust said variable position update frequency as a function of said distance of said mobile terminal from said reference position (col. 8, lines 53-58).

7. Claims 13-14, 18, 23-24, 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Yen (US 2003/0036389).

Regarding claim 13, Yen teaches a method of initiating a search for a control channel in a communications network by a mobile terminal, comprising: storing at least one reference position (col. 4, [0033], x_1, y_1) in said mobile terminal; determining the current position (col. 4, [0035], x_2, y_2); computing a distance of said current position from said reference position (col. 4, [0035, 0036]); and initiating a search for a channel based on said distance (col. 4, [0036]).

Regarding claim 14, Yen also teach the step of establishing communications (col. 4, [0032]).

Regarding claim 18, Yen also teaches using GPS (col. 4, [0035]).

Regarding claim 23, Yen teaches a mobile terminal, comprising: a transceiver 116 (fig. 1), memory 104 for storing at least one reference position (col. 4, [0033], x_1, y_1) in said mobile terminal; a position estimator 114 for determining the current position (col. 4, [0035], x_2, y_2); and control logic 102 for computing a distance of said current position from said reference position (col. 4, [0035, 0036]) and initiating a search for a channel based on said distance (col. 4, [0036]).

Regarding claim 24, Yen also teaches GPS receiver 114 (fig. 1).

Regarding claim 34, Yen teaches a method of initiating a search for a control channel in a radio communications system by a mobile terminal, comprising: repeatedly determining the current location of the mobile terminal with respect to reference position associated with the radio communication system (col. 4, [0035], and [0038]); and initiating a search for a channel based on a computed distance that is less than a predetermined distance ([0035], [0036], less than L).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view of Sugiura et al. (US 6,362,783).

Regarding claim 4, Yee fails to teach determining the velocity of the mobile terminal based on two or more position estimates. Determining the

velocity of the mobile terminal based on two or more position estimates is conventionally well known. Sugiura teaches that the speed of the mobile terminal is determined based on two position estimates (col. 21, lines 32-40). It would have been obvious to one of ordinary skilled in art at the time the invention was made to provide the teaching of Sugiura to the system of Yee in order to indicate the speed or velocity to the user.

10. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view of Yen (US 2003/0036389).

Regarding claim 8, Yee fails to teach searching for a channel in an alternate network when the distance meets a threshold. In an analogous art, Yen teaches searching for a channel in an alternate network when the distance meets a threshold (col. 4, [0036]). It would have been obvious to one of ordinary skilled in art at the time the invention was made to provide the teaching of Yen to the system of Yee in order to conserve battery power.

Regarding claim 9, Yee as modified by Yen also teaches control channel DCCH (col. 2, [0012] of Yen). However, Yee as modified fails to teach a private wireless telephone system. It is taken official notice that the

art using dual mode mobile terminal is conventionally well known. It would have been obvious to one of ordinary skilled in art at the time the invention was made to also include dual mode mobile terminal, which uses the private wireless system to the system of Yee in order to enhance the operability of the mobile terminal.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yee in view Janky (US 5,786,789).

Regarding claim 11, Yee fails to teach that the position estimator is removable from the mobile terminal. Janky teaches that a GPS receiver can be removed from a mobile terminal (fig. 5). It would have been obvious to one of ordinary skilled in art at the time the invention was made to provide the teaching of Janky to the system of Yee in order to reduce the cost of replacement when either one of the two units is damaged.

12. Claims 15-17, 28-31, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yen.

Regarding claims 15-17, Yen fails to teach a private wireless telephone system including short-range communication Bluetooth. It is

taken official notice that the art using dual mode mobile terminal is conventionally well known. It would have been obvious to one of ordinary skilled in art at the time the invention was made to also include dual mode mobile terminal, which uses the private wireless system to the system of Yen in order to enhance the operability of the mobile terminal.

Regarding claim 28, the claim is interpreted and rejected for the same reason as set forth in claims 15-16.

Regarding claim 29, the claim is interpreted and rejected for the same reason as set forth in claim 15.

Regarding claim 30, Yen also teaches repeatedly performing computing the distance (T timeouts [0035]).

Regarding claim 31, Yen inherently teaches repeatedly searching for a channel as long as the distance is less than a predetermined distance (see less than L in [0035] and [0037]).

Regarding claim 33, the claim rate of change also reads on distance values varied between less than L and higher than L in [0035-0037] of Yen.

13. Claims 19-21, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yen in view of Yee.

Regarding claims 19-21, Yen fails to teach the determining a positioning update frequency based upon the distance and rate of change. This technique is addressed in the above with respect to Yee (sleep interval, increase, decrease, col. 8, lines 55-63). It would have been obvious to one of ordinary skilled in art at the time the invention was made to provide the teaching of Yee to the system of Yen in order to reduce power consumption.

Regarding claims 25-26, the claims are interpreted and rejected for the same reason as set forth in claims 19-21.

Allowable Subject Matter

14. Claims 5-6, 22, 27, 32, 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, the prior art of record fails to teach the step of determining the position update as claimed.

Regarding claim 22, the prior art of record fails to teach the step determining and initiating a search based upon the conditions (i) and (ii) as claimed.

Regarding claims 27, 32, 35, the prior art of record fails to teach the initiating a search based upon the condition as claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is (703)-308-5249. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on (703) 308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

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LEE NGUYEN *llw 2/22/03*
Primary Examiner
Art Unit 2683